

## CLAIMS

I claim:

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1. In an asymmetrical digital subscriber line (ADSL) system used between a telecommunications network and a customer's premises, the ADSL system being available to provide voice service and data service to the customer's premises, one service as between  
10 the voice service or the data service being in use with respect to the customer's premises, a method to provide a choice of a selected mode of operation of the other service, the method comprising the steps of:

A. causing the ADSL system to detect a request for the other service;

15 B. causing the ADSL system to provide a list of modes of operation;

C. causing the ADSL system to detect receipt of a selected mode from the list; and

20 D. causing the ADSL system to provide the other service to the customer's premises pursuant to the selected mode.

2. The method of Claim 1, after step A and in response to the request for the other service, further comprising the step of causing the ADSL system to provide impact information on performance of the one service in light of concurrent use of the other  
5 service.

3. The method of Claim 1, after step A and in response to the request for the other service, further comprising the step of causing the ADSL system to provide impact information or effect of  
10 the one service on the other service when the other service is used concurrently with the one service.

4. The method of Claim 1, wherein the available modes of operation comprise a low power mode or a full power mode; and  
15 wherein step B comprises causing the ADSL system to provide the list of available modes of operation by providing the low power mode and the full power mode.

5. The method of Claim 1, wherein the available modes of operation comprise a wait mode; and wherein step B comprises  
20 causing the ADSL system to provide the list of available modes of operation by providing the wait mode.

6. In an asymmetrical digital subscriber line (ADSL) system used in the local loop between a telecommunications network and a customer's premises, the ADSL system being connected to a telecommunications device at the customer's premises and providing  
 5 a voice service of the ADSL system being in use with respect to the telecommunications device, and the ADSL system including an ADSL modem functionally connected to a computer at the customer's premises, a method to operate a data service of the ADSL system pursuant to a selected mode of operation of the data service, the  
 10 method comprising the steps of:

- A. causing the ADSL modem to make a detection of the voice service in use with respect to the telecommunications device at the customer's premises;
- B. in response to the detection, causing the ADSL modem  
 15 to provide the detection to the computer;
- C. in response to receiving the detection from the ADSL modem, causing the computer to display a list of modes of operation;
- D. receiving at the computer a selected mode from the list;
- E. causing the computer to provide the ADSL modem with  
 20 instructions to operate the data service pursuant to the selected mode;  
 and
- F. in response to receiving the instructions, causing the ADSL modem to interact with the ADSL system so as to provide the data service is operated pursuant to the selected mode of operation.

7. The method of Claim 6, wherein step C comprises in response to receiving the detection from the ADSL modem, causing the computer to display information on service performance of each of the modes of operation.

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8. The method of Claim 6, wherein step C comprises in response to receiving the detection from the ADSL modem, causing the computer to provide impact information on performance of the data service in light of concurrent use of the voice service.

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9. The method of Claim 8, wherein step C comprises causing the computer to provide the impact information including effect of the data service on the voice service when the voice service is used concurrently with the data service.

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10. The method of Claim 6, wherein the modes of operation comprise a full power mode and a low power mode; and

wherein step C comprises causing the computer to display the full power mode and the low power mode in the list of modes of

20 operation.

11. The method of Claim 6, wherein the modes of operation comprise a wait mode; and

wherein step C comprises causing the computer to display the wait mode in the list of modes of operation.

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12. In an asymmetrical digital subscriber line (ADSL) system used in the local loop between a telecommunications network and a customer's premises, the ADSL system being connected to a telecommunications device at the customer's premises and a voice service of the ADSL system being in use with respect to the telecommunications device, and the ADSL system including an ADSL modem functionally connected to a computer at the customer's premises, a method to operate a data service of the ADSL system pursuant to a preselected mode of operation of the data service, the method comprising the steps of:

A. causing the ADSL modem to make a detection of the voice service in use with respect to the telecommunications device at the customer's premises;

B. in response to the detection, causing the ADSL modem to provide the detection to the computer;

C. in response to receiving the detection from the ADSL modem, causing the computer to check for a preselected mode of operation;

D. in response to finding the preselected mode of operation;

E. causing the computer to provide the ADSL modem with instructions to operate the data service pursuant to the preselected mode of operation; and

F. in response to receiving the instructions, causing the ADSL modem to interact with the ADSL system so as to operate the data service pursuant to the preselected mode of operation.

13. In an asymmetrical digital subscriber line (ADSL) system used in the local loop between a telecommunications network and a customer's premises, the ADSL system including an ADSL modem functionally connected to a computer at the customer's premises, a data service of the ADSL system being in use through the ADSL modem to the computer, and the ADSL system also being connected to a telecommunications device at the customer's premises, a method to provide impact information on performance of the data service in light of concurrent use of a voice service of the ADSL system, the method comprising the steps of:

- A. causing the ADSL modem to make a detection of an off-hook indication with respect to the telecommunications device;
- B. in response to the detection, causing the ADSL modem to provide the detection to the computer; and
- C. in response to receiving the detection from the ADSL modem, causing the computer to provide impact information on performance of the data service in light of concurrent use of the voice service.

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14. The method of Claim 13, wherein step C comprises causing the computer to provide the impact information including effect of the data service on the voice service when the voice service is used concurrently with the data service.

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15. The method of Claim 13, further comprising the steps of:

D. in response to receiving the detection from the ADSL modem, causing the computer to display a list of modes of operation;

5 E. receiving at the computer a selected mode from the list;

F. causing the computer to provide the ADSL modem with instructions to operate the data service pursuant to the selected mode; and

10 G. in response to receiving the instructions, causing the ADSL modem to interact with the ADSL system so as to operate the data service pursuant to the selected mode of operation.

16. In an asymmetrical digital subscriber line (ADSL) system used in the local loop between a customer's premises and a telecommunications network serving the customer's premises, the ADSL system including an ADSL modem functionally connected to a computer at the customer's premises, a data service of the ADSL system being in use through the ADSL modem to the computer, and the ADSL system also being connected to a telecommunications device at the customer's premises for voice service to the telecommunications device, a method to provide impact information on performance of one service as between the data service or the voice service in light of concurrent use of the other service, the method comprising the steps of:

A. causing a detection by the telecommunications network of an off-hook indication with respect to the telecommunications device;

B. in response to the detection, causing the telecommunications network to make a determination that the data service is in use at the customer's premises; and

C. in response to the determination, causing the telecommunications network to provide an announcement including impact information on performance of the one service in light of the concurrent use of the other service.



17. The method of Claim 16, wherein step C comprises causing the telecommunications network to provide the announcement by including in the impact information effect of the one service on the other service when the other service is used  
5 concurrently with the one service.

18. The method of Claim 16, further comprising the steps of:  
D. in response to receiving to the determination, causing the telecommunications network to announce a list of modes of operation  
10 of the data service to the telecommunications device;

E. receiving at the telecommunications network a selected mode;

F. causing the telecommunications network to provide the ADSL system with instructions to operate the data service pursuant to  
15 the selected mode; and

G. in response to receiving the instructions, causing the ADSL system to operate the data service pursuant to the selected mode of operation.

19. In a telecommunications network, and particularly in an asymmetrical digital subscriber line (ADSL) system used in the local loop between the telecommunications network and a customer's premises, the ADSL system being connected to a telecommunications
- 5 device at the customer's premises and a voice service of the ADSL system being in use with respect to the telecommunications device, and the ADSL system including an ADSL modem functionally connected to a computer at the customer's premises, a system to operate a data service of the ADSL system pursuant to a selected
- 10 mode of operation of the data service, the system comprising:
- A. the ADSL modem being operative to make a detection of the voice service being in use with respect to the telecommunications device at the customer's premises and to provide the detection to the computer;
- 15 B. the computer being operative, in response to receiving the detection from the ADSL modem
- i. to display a list of modes of operation,
- ii. to receive a selected mode from the list, and
- iii. to provide the ADSL modem with instructions to
- 20 operate the data service pursuant to the selected mode; and
- C. the ADSL modem being further operative, in response to receiving the instructions, to interact with the ADSL system so as to operate the data service pursuant to the selected mode of operation.

20. The system of Claim 19, wherein the computer is further operative, in response to receiving the detection from the ADSL modem, to provide impact information on performance of the voice service in light of concurrent use of the data service.

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21. The system of Claim 19, wherein the computer is also operative, in response to receiving the detection from the ADSL modem, to provide the impact information including effect of the data service on the voice service when the voice service is used

10 concurrently with the data service.

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22. In a telecommunications network, and particularly in an asymmetrical digital subscriber line (ADSL) system used in the local loop between the telecommunications network and a customer's premises, the ADSL system being connected to a telecommunications  
5 device at the customer's premises and a voice service of the ADSL system being in use with respect to the telecommunications device, the ADSL system including an ADSL modem functionally connected to a computer at the customer's premises, the ADSL system being available to provide voice service and data service to the customer's  
10 premises, and one service of the voice service or the data service being in use with respect to the customer's premises, a system to provide a choice of a selected mode of operation of the other service, the system comprising:

A. the ADSL modem being operative to make a detection of  
15 a request for the other service and to provide the detection to the computer;

B. the computer being operative, in response to receiving the detection from the ADSL modem

i. to display a list of modes of operation,  
20 ii. to receive a selected mode from the list, and  
iii. to provide the ADSL modem with instructions to operate the other service pursuant to the selected mode; and

C. the ADSL modem being further operative, in response to receiving the instructions, to interact with the ADSL system so as to  
25 operate the other service pursuant to the selected mode of operation.

23. The system of Claim 22, wherein the computer is further  
operative, in response to receiving the detection from the ADSL  
modem, to provide impact information on performance of the one  
5 service in light of concurrent use of the other service.

24. The system of Claim 22, wherein the computer is also  
operative, in response to receiving the detection from the ADSL  
modem, to provide impact information including effect of the one  
10 service on the other service when the other service is used  
concurrently with the one service.

25. In an asymmetrical digital subscriber line (ADSL) system between a customer's premises and a telecommunications network serving the customer's premises, the ADSL system including a first ADSL modem functionally connected through twisted pair wiring to a second ADSL modem, the first ADSL modem also being functionally connected to the telecommunications network, the second ADSL modem also being functionally connected to a computer at the customer's premises for the provision of data service to the customer's premises, and the ADSL system also being connected through the twisted pair wiring to a telecommunications device at the customer's premises for voice service to the telecommunications device, a system to provide impact information on performance of one service as between the data service or the voice service in light of concurrent use of the other service, the system comprising:

A. a switch in the telecommunications network being operative

to detect an off-hook indication with respect to the telecommunications device,

to communicate with the first ADSL modem to make a determination that the data service is in use at the customer's premises, and

to send a message to an intelligent peripheral in the telecommunications network regarding the off-hook indication; and

B. the intelligent peripheral in the telecommunications network being operative

to respond to the message from the switch by providing an announcement including impact information on performance of the  
5 one service in light of the concurrent use of the other service to the telecommunications device.

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26. The system of Claim 25, wherein the impact information comprises effect of the one service on the other service when the other service is used concurrently with the one service.

5 27. The method of Claim 25, wherein the announcement comprises a list of modes of operation of the data service;

wherein the intelligent peripheral is operative to receive a selected mode and to provide the ADSL system with instructions to operate the data service pursuant to the selected mode.